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The impact of specific interventions on child engagement in a preschool classroom

Sarah Elizabeth Farber
University of Northern Iowa

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Abstract

The purpose of my action research was to integrate environmental changes and instructional strategies into my preschool classroom. These strategies were presented at monthly professional development trainings, which focused on increasing the engagement of all students in the classroom. This study included a sample of three students, two general education students and one with an individualized education program (IEP). These students were video recorded once a month at group time and observed using a data collection tool presented at the professional development meetings.

The results showed that the environmental changes and instructional strategics implemented were effective in increasing the engagement of the children participating in the study. Limitations of the study included the small sample size and lack of other observers. A recommendation for further research included expanding the sample size to include more general education and special education students, and more observers to increase the reliability of the study.

THE IMPACT OF SPECIFIC INTERVENTIONS ON CHILD ENGAGEMENT IN A PRESCHOOL CLASSROOM

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Sarah Elizabeth Farber

University of Northern Iowa

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5.3.2016	Linda May Fitzgerald
Date Approved	Graduate Faculty Reader
5-3-2016	Mary Donegan-Ritter
Date Approved	Graduate Faculty Co-Reader
5-3-16	
Date Approved	Graduate Faculty Co-Reader
5-3-16	Jill Uhlenberg
Date Approved	Head, Department of Curriculum and Instruction

ABSTRACT

The purpose of my action research was to integrate environmental changes and instructional strategies into my preschool classroom. These strategies were presented at monthly professional development trainings, which focused on increasing the engagement of all students in the classroom. This study included a sample of three students, two general education students and one with an individualized education program (IEP). These students were video recorded once a month at group time and observed using a data collection tool presented at the professional development meetings. The results showed that the environmental changes and instructional strategies implemented were effective in increasing the engagement of the children participating in the study. Limitations of the study included the small sample size and lack of other observers. A recommendation for further research included expanding the sample size to include more general education and special education students, and more observers to increase the reliability of the study.

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Introduction

Preschool plays a vital role in laying a solid foundation for a child's academic success and has a significant impact on a child's social and emotional development. Teachers purposefully plan and execute activities that target these specific areas of development. For children to become independent and motivated learners, they must be engaged in classroom activities. McWilliam and Casey (2008) reported that increased engagement levels led to positive benefits in cognitive, social, and behavioral skills. As activities take place, preschool teachers monitor and observe students for levels of engagement. As children engage more in school, it can positively impact their learning and development.

In school district 622, the administration decided to implement a new model of classroom engagement to strengthen school readiness for all preschool students including special education and general education students. This program would strengthen the already valued early childhood special education and general preschool programs within the district. To ensure the program's success, the district staff and community partners agreed that during year one, emphasis would include professional development for all early childhood staff. The purpose of my research was to integrate information gathered during classroom engagement trainings and evaluate the effectiveness of the professional development in my classroom. The study lasted from February 8 to April 1, 2016.

An implementation team met monthly to talk about the progress of the classroom engagement model within the early childhood programs. The implementation team was composed of a combination of preschool general education and preschool special education teachers, the program directors, community preschool program staff, a preschool occupational therapist, and an internal and external coach. The team helped teachers buy into the process of

creating a more effective classroom climate by implementing classroom engagement strategies that could benefit student learning. The monthly classroom engagement trainings were presented by the Minnesota Center of Excellence, in partnership with school district 622.

Teachers see child engagement in a variety of everyday activities. Examples include a child responding to a teacher during a shared book reading, a child using a shovel to dig a hole in the sandbox, two children interacting in the block area during active learning, or a group of children playing together on the playground. Children also engage in the preschool classroom on different levels. McWilliam and Bailey (1995) stated

> A young child's engagement in a preschool program is likely to be affected by a wide range of variables, some of which are inherent within the child (e.g., ability status, mastery motivation, temperament) and others that are characteristics of the environment (e.g., adult involvement in activities, peer grouping, physical arrangement). (p. 124)

Children acquire meaningful behaviors relevant to their learning environment when teachers and caregivers purposely plan and think about how to effectively engage students. Children who are engaged are ready to learn, and as they are engaged, they experience more opportunities to practice new skills. Teachers can also use a child's increased engagement to help guide learning. Jablon and Wilkinson (2006) reported that "the use of engagement strategies is a powerful teaching tool critical in promoting children's achievement because it focuses children on learning, supports learning specific skills and concepts, and provides children positive associations with learning" (p. 2). If children aren't engaged in learning activities, there will be no opportunity to practice skills they already know or to learn new skills. In addition, adults will not be able to use any instructional strategies to help children learn. Children need to

feel successful in their learning to reinforce their engagement with people and materials in the classroom.

Classroom engagement also plays an important role in creating a positive learning environment. Engaged students promote a positive classroom climate as they interact more with their peers, use classroom manipulatives and materials more often, and spend more time actively learning. When students spend more time engaged, misbehavior, acting out, or being off-task decreases. In addition, children with disabilities in the classroom tend to be more disengaged than their typically developing peers. Increasing engagement plays an important role in helping children meet their individual development goals in different areas (McWilliam, 2008).

Increased engagement leads to the development of social-emotional and academic skills that are needed as children continue their education. The purpose of my action research is to explore the effectiveness of the collection of environmental changes and instructional strategies in engaging preschool students. To improve the overall engagement of my students, I attended monthly trainings that were part of professional development on the classroom engagement model. These trainings provided information on best instructional strategies and environmental changes that can be used in the classroom to help engage students.

Literature Review

Introduction to Literature

In order to improve teaching practices, teachers should reflect and make changes as needed. When children are not meeting objectives, the teacher may make an environmental or instructional change to try to effectively reach the students in the class. In recent years, professional organizations have published recommended practices to guide teachers in the use of research-based teaching and caregiving practices that can increase child engagement (The

Division for Early Childhood, 2014). Students who are actively engaged have more opportunities to exercise their knowledge when their teachers use best instructional strategies (The Early Childhood Technical Assistance Center, 2015). The professional development trainings were based on McWilliams and Casey's model of classroom engagement and the "Scale for Teachers' Assessment of Routines Engagement" (STARE). Since their model was presented in explicit detail at professional development sessions, I based my research study on the information provided at trainings and further information I researched independently. The literature review is structured around classroom engagement, environment, and instructional strategies as covered in the professional development trainings.

Classroom Engagement

McWilliams and Casey (2008) defined engagement as "the amount of time a child spends interacting with the environment in a developmentally and contextually appropriate manner at different levels of competence" (p. 125). Engagement is an important aspect of a child's development, as recent research indicates a relationship between preschool students' attention and the varying readiness skills as students enter school (Chang & Burns, 2005). Teachers monitor students' engagement as a way to reflect on students' achievement, and decide if any interventions or changes in teaching are necessary. When teachers design interventions around student engagement, they help children focus on learning, support specific learning skills and concepts, and provide a positive association with learning for the child (Jablon & Wilkinson, 2006).

A child can engage in a variety of ways in a typical day in the classroom. His or her engagement may be passive or active, "but active engagement is considered more developmentally advantageous and sophisticated" (McWilliam & Casey, 2008, p. 125). Children

can experience different levels of engagement, varying from non-engaged to sophisticated, which create a developmental hierarchy. Below are the five levels of engagement, and examples of what this might look like in a typical preschool classroom.

Developmental Model of Levels of Engagement

Level	Examples
Non-Engaged: Unoccupied; engaged in non-desired behavior	Not looking or listening
Unsophisticated: Casual attention, repetitive play	Scanning the room at different activities; rolling a car back and forth repeatedly without changing behavior
Average Engagement: focused attention	Watching or listening to a feature in the environment for at least three seconds; watching and listening to a story at group time
Advanced Engagement: differentiated behavior	Participating; talking and creating
Sophisticated Engagement: Constructive and encoded	Symbolic talk, pretending and persisting

McWilliam & Casey, 2008, p. 5-6

The levels of engagement are important as more sophistication in play extends to children's level of motivation to learn and progress in their education. Children who have higher levels of engagement have higher levels of motivation towards learning. Evidence shows that a child's preschool experiences are related to the development of the child's later academic and social skills. A child's level of engagement drives his or her success in the learning process. Research-based evidence indicates that children who engage actively with teachers, peers, and activities maximize their opportunities to learn and succeed in school (Vitiello, Booren, Downer, & Williford, 2012).

Environment

Campbell and Milbourne (2014) wrote, "Environmental practices include structural supports that help all children participate successfully in a classroom and include a variety of

evidence-based strategies that support children's performance by impacting directly on the environment" (p. 22-23). The physical environment refers to many aspects of the preschool classroom, which includes the materials, equipment, routines, and activities teachers can intentionally alter to support children's overall learning. The physical environment also includes the social and temporal environment. The social environment relates to children's interactions with caregivers and other adults in the classroom. It also refers to their emotional well-being. Temporal environment refers to the routines and activities in a child's daily preschool classroom (Division for Early Childhood, 2014).

Research indicates the need to pay attention to how the classroom is set up. The physical environment itself should be accessible and engaging to all to children. Children with special needs may need changes in the environment to encourage social interaction with peers. According to Boyd, Conroy, Asmus, McKenney, & Mancil (2008), this may include reducing the amount of area between children in play areas, providing access to higher-functioning peers, having appropriate materials and toys available, limiting the amount of adult interaction in peer interactions, and participating in cooperative activities.

Instructional Strategies

Using effective instructional strategies is another key component of the classroom engagement model, as instructional strategies can have a positive impact on child's learning and development. The professional development trainings focused on Response to Intervention (RTI) and incidental teaching. According to the Division of Early Childhood (DEC) (2014), "Instructional practices are intentional and systematic strategies to inform what to teach, when to teach, how to evaluate the effects of teaching, and how to support and evaluate the quality of instructional practices implemented by others" (p. 11). Teachers who use effective instructional

strategies keep their children focused, help the children remain energized and on task, and keep misbehavior to a minimum (Jablon & Wilkinson, 2006).

RTI is a common instructional strategy that serves as an intervention in early childhood classrooms. With the RTI framework, teachers evaluate their students to find areas of development that require an intervention.

According to DEC (2014),

> The goal of implementing an RTI framework with young children is to be aware of areas (academic, behavioral, etc.) in which each child has differing needs and to match instructional and behavioral systems of support to those individual needs. Creating a match between teaching/caregiving and children's needs requires a means for implementing a hierarchy of support that is differentiated through a data-based decision-making process. (p. 6)

Teachers who use RTI framework are using a multi-tiered system of teaching, which is supported by research-based evidence. Teachers use the multi-tier system to meet the differing needs for their students. The bottom level, or the first tier, is composed of core content that is deemed appropriate for all young children. Tier 2, the second level, meets the needs of students who may need a little extra support and supplemental teaching. The third level, or tier 3, involves those students who need highly individualized teaching (Division of Early Childhood, 2014). The RTI framework is used in the classroom engagement model as interventions are designed and implemented to meet student's individual needs and to increase their overall engagements.

Incidental teaching, which includes embedded interventions, is another key instructional strategy for the classroom engagement model. Teachers who use incidental teaching are paying attention to what interests their students, finding it within context, and then helping to expand the

child's engagement or move it to a higher level of sophistication (McWilliams & Casey, 2008). When teachers use incidental teaching, the learning happens within an activity that the child enjoys. Embedded interventions are needed throughout the day to help children with disabilities benefit in daily routines, in addition to lessons (McWilliams, 2010). Teachers can work on children's specific goals using embedded intervention in natural environments, which can help to increase their overall levels of engagement.

Methods

Professional Development

Over the course of this study, I attended four trainings that discussed strategies to engage children in the classroom. These trainings were led by the Minnesota Center of Excellence. After each training, I made changes to the classroom environment and instructional strategies to improve overall student engagement.

These trainings included:

- Training 1 – October 30, 2015: Classroom Wide Strategies
  - Topics discussed:
    - What is engagement?
    - How to prepare the classroom environment
    - Maximizing routines by building routines within routines
    - Zoning

- Training 2 – December 18, 2015: Engaging Individual Children
  - Topics discussed:
    - Review of training one
    - Benefits of zoning
    - Embedding learning opportunities
    - Using materials and props to support the needs of students in routines

- Training 3 – January 15, 2016: Engaging Individual Children: Part 2
  - Topics discussed:
    - Strategies to increase independence and engagement for individual children
    - STARE tools

- Training 4 – February 12, 2016: Caregiver Collaboration
  - Topics discussed:
    - Incidental Teaching
    - Peer Mediated Strategies to increase engagement
    - Family Engagement

Subjects

To avoid bias, I asked another preschool teacher to email parents of children in my classroom explaining the purpose and procedures and seeking permission to work with their child in the classroom engagement study. Of the parents who responded, the other preschool teacher randomly selected three students to participate in the study. These students attended half day preschool on Monday, Wednesday, and Friday mornings from 9:15-11:45 AM. There are twenty students total in the class, with five students having an individualized education program (IEP). One student in the classroom engagement model study has an IEP, while the second and

third child are general education preschool students. The ages of the three children range from three-five years old. Each parent signed a consent form and returned it prior to the start of study.

Data Collection

I used the classroom engagement model as an intervention for my students, and as a tool to improve my instruction. To collect data on changes in child engagement over the course of the professional development project, I used the STARE tool, anecdotal records, and video analysis from group time.

STARE

The STARE is a tool that was presented in depth at the third classroom engagement training. At the training, I was given instruction about how to use the STARE to track a child's engagement, as well as how to determine the quality of engagement. The STARE tool required an observer to track the child for ten minutes in different routines, which included active learning, small groups, and large motor play (McWilliams, 2000). Observers watched how long the child engaged with peers, adults, and materials to evaluate the overall time a child was engaged. The STARE was a beneficial tool to this study, as it provided data on an individual child and what his or her level of engagement looked like in each activity. I completed the STARE for each child a total of three times during the study, and in three different areas of the classroom. I completed nine observations for each child, for a complete total of 90 minutes of observation per child.

Anecdotal Notes

I observed students and recorded anecdotal notes on how they reacted to different environmental changes and instructional strategies. As I participated in the classroom

engagement model's training, I made modifications to the setup and the routines of the classroom based on observations and anecdotal notes of how each student reacted to environmental changes or teaching strategies. Recording observations of child engagement in classroom activities provides valuable information to teachers about whether or not students are engaged with the teachers, environment, as well as peers.

Video Analysis of Group Time

Lastly, our group meeting time was video recorded monthly over a span of four months from January to April. During the fourth Minnesota Classroom Engagement training, engagement was explained in three levels of participation: looking, movement, and verbally responding. Each video was coded for total seconds of child engagement during group time based on the three levels of participation. In the video, all students are visible. I randomly selected 12 minutes of the video to observe, and broke this 12-minute segment into four sections of three minutes each. Based on the data collected from the video observations, I was able to provide interventions to boost students' engagement.

Data Analysis

For each child, I completed the STARE a total of three times, observing every two weeks during a six-week period. I documented the routine, and the overall score for their engagement with adults, peers, and materials. Each child was also given an overall score for their engagement complexity in the activity. For each routine, the child was marked on a scale from one to five, regarding how much they engaged with adults, peers, and materials. A score one meant the child engaged almost none of the time, a two represented little of the time, a three was half the time, a four indicated much of the time, and a five represented engagement almost all of the time. Complexity of engagement was rated from non-engaged to sophisticated behavior. If a child

displayed more than one level of complexity in his or her observation, I recorded the higher complexity observed.

Each child was observed in the routine for 10 minutes at a time and I recorded notes on their behavior and made a final decision on their engagement level based on my observations. The overall complexity level for each routine was placed into a bar graph so that the results over time could be analyzed.

For another data source, I recorded classroom circle times four times; however, each child was only observed for engagement levels a total of three times due to student absences. I tracked the total seconds each child was engaged during group time. I defined engagement as the child looking, manipulating materials, and verbally responding. If the child was engaged in at least one of the aforementioned manners, it was recorded as still engaged. If the child stopped engaging, I would stop the timer and restart it when the child engaged. At the end of the video observation, I totaled the seconds of engagement and divided this number against the total number to determine the child's percentage of engagement.

To analyze my data, I created a line graph to depict the percentage of engagement for each child over time. My anecdotal notes from the recordings also provided a better picture of what worked and didn't work for group time. This included changing the environment and routines of our group time. The percentages of engagement for each child changed over time and the increases and decreases were analyzed based on what songs and greetings provided the best environment for keeping students motivated and engaged.

Results

The purpose of this study was to determine whether three student's engagement would increase after I implemented environmental and instructional strategies that were part of a

professional development project that specifically focused on engaging children in the classroom. I used data-based decision making to guide my planning and teaching and to monitor changes in child engagement. This section describes changes in my teaching practices and changes in each child's engagement over time.

Teaching Practices during Circle Time

The circle time consists of four components that stay consistent each day: greeting, message, song, and book. Before starting the classroom engagement trainings, the students would raise their hands to have turns participating in our circle. These turns included reading our message or answering questions.

Teacher Changes

At our first engagement training, we discussed how to prepare the classroom environment and how to maximize our classroom routines to promote engagement in every child. When I returned to my classroom, I implemented several strategies to try to increase students' engagement levels. The first change was to use popsicle sticks with students' names on them. I used these when I needed a child's help with an activity, and it minimized students' need to raise their hands during group time. I posted a routine within routine schedule, which was our morning circle routine. This schedule was predictable and read at the start of every circle time. It included pictures that represented steps of our circle: greeting, message, song, and book. I also posted the classroom schedule near our meeting space, and choose a child using a popsicle stick at the conclusion of every circle so that the students were aware of our classroom's daily schedule.

Training two revisited topics discussed in our first training, which included environmental changes and maximizing routines. We discussed individual teaching strategies to

support engagement, and how to embed goals into routines. In the classroom, I gave both Child A and Child B an individual schedule with picture cards so that they had their own circle schedule to track what would happen next. I also gave my students props to use during our greeting so that all students were manipulating an object during the song.

At the third classroom engagement training, we reviewed ways to increase the engagement of individual children, which included embedding goals into routines, and using prompting on a "least to most" scale when children need extra assistance. In the classroom, I continued to have children use individual mini-picture schedules to follow along with our circle schedule, added more props to songs, and prompted students as needed to help them continue to stay engaged.

The fourth training I attended revisited topics that had been discussed in the previous three trainings, and also introduced incidental teaching and peer mediated strategies. In the classroom, the children continued to use their individual mini-picture schedules, use props, and were prompted by the teacher when needed. In addition, I implemented a peer-mediated strategy with Child C after the fourth training. When he noticed another child was not raising his hand for his turn, I was able to prompt Child C to crawl over to the other child and assist the other child in raising his hand. In the video footage, he is seen helping the child raise his hand and hear child C say, "It's your turn to raise your hand!"

Child Engagement Changes

Circle Time

As shown in Figure 1, during the first circle time Child A had an overall engagement of 36 percent, and Child B had an overall engagement of 41 percent. In the video recording, both children A and B are seen clapping during songs and looking around at peers while singing a

greeting song. Child C was absent at this meeting, so I could not record his engagement until the next meeting.

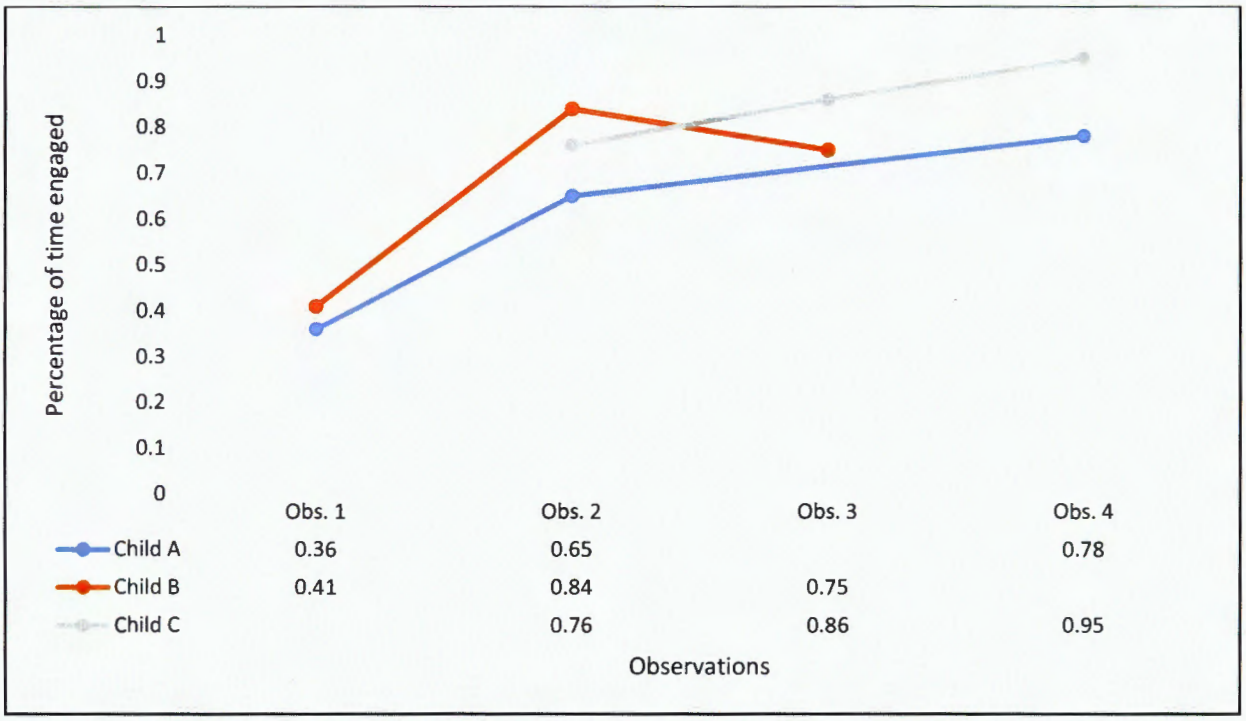

Figure 1: Circle time observations. Percentage of time each child was engaged during classroom large group circle time.

After training two, there was an increase in engagement for children A and B. In the review of the videotape, both are seen watching teachers and peers, singing songs, and making movements with their hands. They are using individual picture schedules to follow along with our group schedule, and also holding props during our song. Child A's percentage increased by 29 percent to 65 percent, while Child B increased 43 percent to a total engagement of 84 percent. This can be viewed as observation two in figure one. Child C, who is also viewed on this tape, is engaged during our circle by watching peers answering questions, singing songs, and making hand movements during the song. When observed for engagement, he was at 76 percent.

After training three, I recorded child B for his third and final observation. His overall percentage for engagement was at 75 percent, which was nine percent lower than his second observation. Even though he is engaging by using a mini-picture schedule, singing and using song props, he needed a few teacher prompts to continue to participate. A teacher's aide sat next to him, which distracted him. He is observed several times trying to engage in conversation with her instead of participate in group. Child C, had an overall percentage during his second observation of 86 percent, which is an increase of 12 percent from observation one. He was using a mini-picture schedule to follow our circle schedule, and engaging by singing songs, manipulating objects, and looking at the teacher and peers during the greeting,

In the fourth videotape, I observed Child A and Child C for the third and final time. Child A had a percentage of 78 percent, which is an increase of 13 percent from observation two to observation three. In observation three, Child A used his mini-schedule to follow along with the routine, sang songs, manipulated objects, and responded to questions when his popsicle stick was drawn from a cup. Child C reached 95 percent on his third and final observation, as seen in Figure 1. This is an increase of 9 percent from observation two. Child C participated in some peer-mediated strategies in the fourth videotape session. At one point, he is seen pointing out that a child is not raising his hand for his turn to take a prop for a song. I prompted him and asked him if he could help the other child. Child C crawled over to the other student, and raised his hand to help the child.

Small Group, Gym, and Active Learning Time

To assist in tracking and recording students' engagement levels in other parts of the day, I used the STARE tool, which was discussed during the third training. I completed the STARE tool for each child three times over a six-week period. I completed a baseline for each child, then

observed again two weeks later, and observed a third time four weeks after I did the baseline observation. For ten minutes, I would observe the students in small group, gym, and active learning. Each child received an overall score for their level of complexity during their ten minutes at the activity. I focused on the complexity score, as the type of complexity children display is extended towards the level of motivation children have towards learning. Based on the notes I recorded and the child's overall engagement level, I was able to use different interventions from the classroom engagement trainings to boost the child's complexity of engagement.

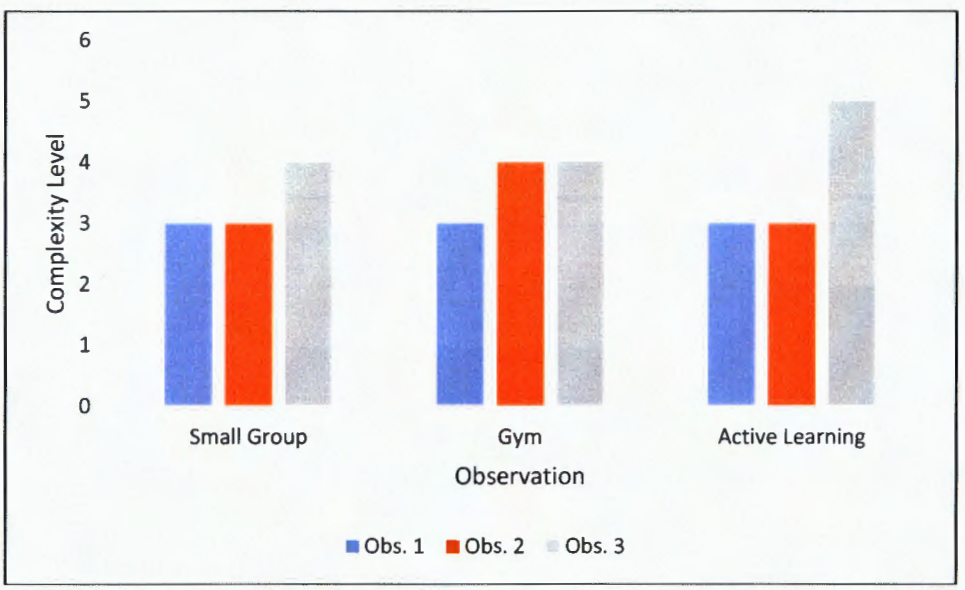

Figure 2: STARE Observations Child A. Complexity level scores for Child A at small group, gym, and active learning.

As shown in Figure 2, during baseline, Child A participated in small group, gym, and active learning at a complexity level three, which is average. Average participation meant he was following routines and participating in the activities. When I observed him again two weeks later, his small group and active learning levels remained at a three, but his gym level had increased to a four. He was playing regularly with a peer, and they were talking while they

created a game of chase together. During his final observation two weeks later, all of his levels had increased from the initial observation. He had more engaging materials at small group, and I observed him talking and creating a story with pretend animals while engaged with a peer next to him. In the gym, he was riding a bike that allowed a passenger to sit in the bike, and he was pretending to drive the other child around. During active learning, another teacher was in the dramatic play area, and I observed Child A playing the role of an animal doctor and pretending to take care of a dog. At one point, he is seen pretending to give the puppy a shot. The teacher was providing many prompts for child A, which was part of the classroom engagement training that included incidental teaching. The finding that he was more actively engaged and pretending suggests that incidental teaching used by the teacher is an effective engagement strategy.

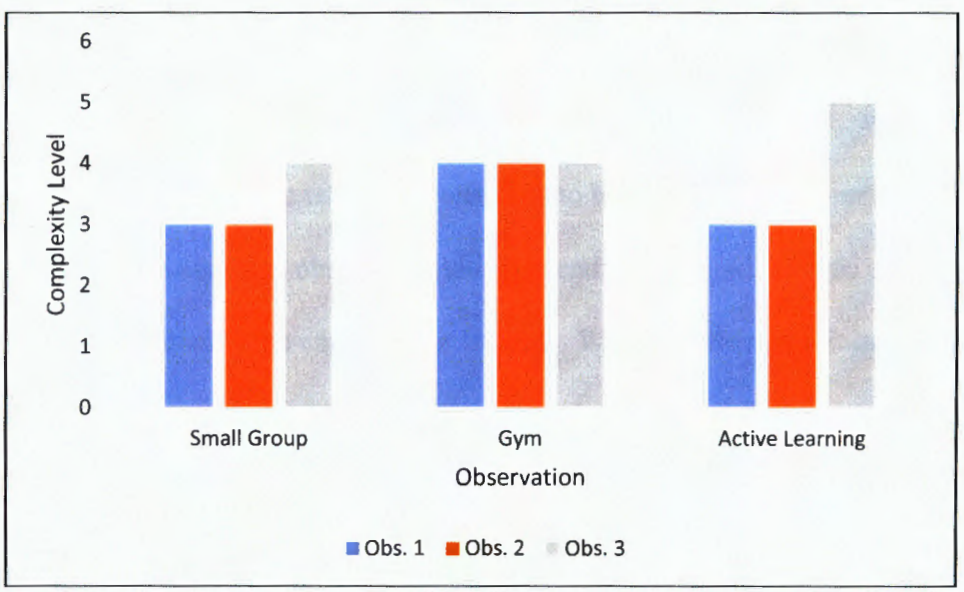

Figure 3: STARE Observations Child B. Complexity level scores for Child B at small group, gym, and active learning.

As shown in Figure 3, Child B's baseline observation placed him at a complexity level of three for both small group and active learning, and at level four for gym. At small group, he was

playing a simple dice game and moving counters to participate. When I observed him in active learning, he was moving from center to center and engaging with the materials about the half of the time. In the gym, he was playing with his peers almost all of the time, and they were creating scenarios in which they were being animals in cages. When I observed him two weeks later, his complexity remained the same. In the gym, another peer invited him to play, and he agreed. I observed them playing together and throwing a ball back and forth during a made up game.

During the third observation, the complexity levels increased from the initial observation for small group and active learning, but remained at level four for gym. During his small group activity, he was creating a journal page in which he was asking for an animal from the zoo. During the middle of the activity, he leaned over and asked a peer if he could help them, which was a peer-mediated strategy that he had been previously taught as part of the classroom engagement trainings. In the gym, I observed him playing with a peer and pretending to have a race while riding bikes. For active learning, he scored a complexity level of five, which was sophisticated. He was using symbolic talk and pretending to be fishing with a peer at the magnetic fishing center. He also was observed inviting friends to play, which was another intervention used from the classroom engagement training. When another peer joined him, he was observed telling the other child, "We are fishing at the lake! Look how many sharks I caught!" He is engaging with peers and using pretend play, which increased his complexity level.

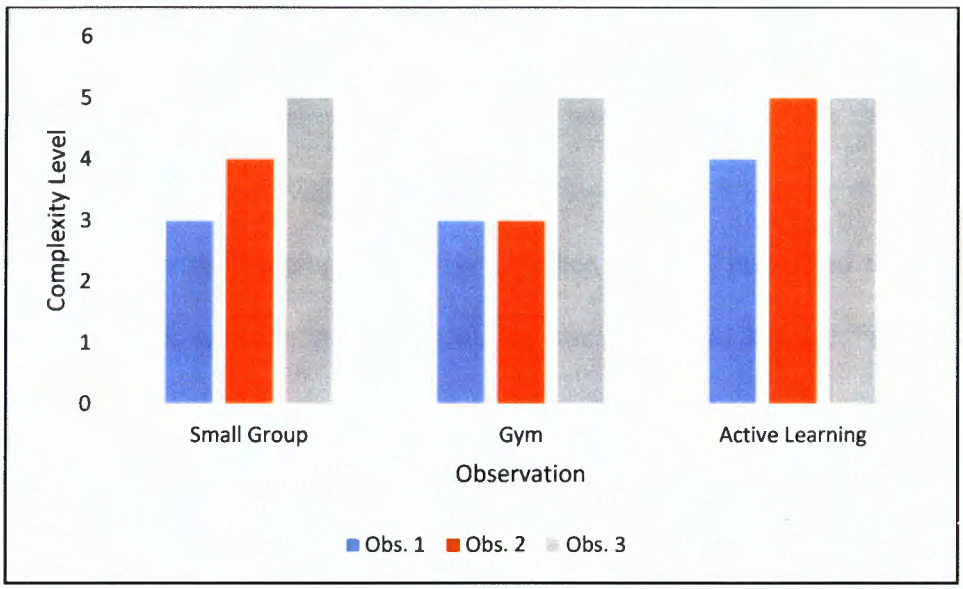

Figure 4: STARE Observations Child C. Complexity level scores for Child C at small group, gym, and active learning.

Figure 4 shows the complexity levels for Child C over the span of three observations. During his first observation, I recorded him at a level three for both small group and gym, as he was mainly following routines and participating. However, for active learning, he was rated at a four as he spent the entire ten minutes at the writing center, engaged almost all the time with materials and creating a drawing of a castle. When I observed him two weeks later, his complexity score during gym remained at a three, but at small group level had moved to a four. He was using crayons and paper and drawing in his journal, which was very engaging for him. He was creating a picture about an animal he wanted the zoo to send him. In active learning, he moved to a five as he was seen pretending to be a doctor in the vet clinic. A teacher was present in the center and prompting him to engage and persist in his learning, which was a component of the classroom engagement trainings.

When I observed him again two weeks later, he scored a five for all activities. In small group, he was again drawing, which is something he excels at in the classroom. In the gym, he

was pretending to be an animal, and engaged with his peers almost all of the time. He asked to play with his peers and had them pretend to chase him and put him back in the cage. During active learning, he was again observed in the dramatic play center. A teacher was again in that center, prompting children and helping them play together. Child C pretended to be an animal doctor, taking care of sick animals. At one point, he was overheard saying, "Your dog has a broken leg. He has to rest a couple of days. Like, probably for five days and on the sixth day he can come out!"

Discussion

The goal of my action research was to increase student engagement through environmental changes and instructional strategies. Students' engagement is positively impacted when they are provided with effective instructional strategies, efficient routines, and a physical environment that is easily accessed. To implement these changes, I was provided with an instructional model that is research-based and consists of on-going training. In addition, I was provided an observation tool that tracked engagement levels and the changes to their engagement over time.

The first training I attended discussed how to set up an effective classroom environment and how to maximize routines. As I returned back to the classroom, I was able to make toys easily accessible to the students, select materials that were inviting and engaging to the students, and arrange the furniture in an inviting way. As the trainings continued, I was taught more about embedding goals and incidental teaching that could be used during active learning. In the last observation of active learning for child A and C, a teacher is in the dramatic play area using incidental teaching to engage the children with materials and their peers. The complexity score of a five on Child A and Child C's STARE observations suggests that using incidental teaching

to engage children was effective as she was able to elicit pretend play using the interests of the children and in the play context.

Child B was also able to move his complexity levels into sophistication during the last observation. During our last two weeks of the study, I purposely planned activities for him and a higher functioning student to practice inviting a child to play. In the final observation for both his small group and active learning, he invited a peer to play and helped a peer with his journaling. Drawing on the documentation and notes from the STARE, I was able to effectively use RTI to meet child B on his level and move his engagement to a higher level (Division of Early Childhood, 2014). At the conclusion of the study, Child A and C were able to increase their complexity scores in all three areas, while Child B increased scores in two contexts. This finding of the increased complexity levels suggests that the use of incidental teaching, embedding the children's goals into routines, and providing an accessible physical environment is effective in increasing students' complexity levels in classroom engagement.

The instructional strategies that were taught to the students were effective in active learning as well as in the gym and during small group. When another teacher or I was able to embed learning goals, such as interacting with peers or creating a made-up play scenario, they were able to meet that goal either on their own or with the support of a higher functioning peer. Incidental teaching also proved effective as I was able to use materials that engaged the students and provide the lessons in the environment the child was visiting (McWilliams, 2010).

The findings that both Child A and Child B's overall engagement increased from observation one to observation two suggests that the environmental changes I made to the classroom were effective in raising children's overall engagement. After I provided props and materials to our group circle time, child A's engagement increased by 29 percentage points (from

36% to 65%) and child B increased by 43 percentage points (From 41% to 84%). Despite child C not being in attendance during our first videotaping, he was engaged 76 percent of the time in his first observation. Providing a mini-schedule to the children also proved to be a strategy that improved overall engagement. Before the use of the mini-schedule, Child A and Child B were below 50 percent engagement. After giving them this individual prop, they were able to increase their engagement levels from observation one to observation two.

Limitations

Despite seeing improvements in the engagement in all three children involved in this study, there are also limitations that need to be addressed for future research. The study only involved a total of three students, who attend preschool three days a week, and the study only lasted a total of six weeks. A sample of more children could provide a different outcome of the engagement model and whether or not the instructional strategies and environmental changes would prove to be effective for all. The study also had no control group benefitting from the intervention, so it cannot be ruled out that all three children in the study would have shown as much progress just due to maturation or development with or without intervention.

Another limitation to the study was the time frame that the study was completed in. The school year itself started in September, with the trainings starting in late October and the observations starting after January. The observations and engagement levels could have been different if the study started closer to the beginning of the school year and continued throughout the entirety of the school year. This study was completed in just under four months.

A third limitation of the study was the lack of other observers. I am the primary teacher for all three students and was the only person completing the observations of both the videotape

footage and SCALE tool. As I was the only observer, the reliability of the data gathered could be questioned since there was no other person to complete observations and compare.

Recommendations for Future Research

The research that I completed was on small scale, only observing three students over a span of four months. This study could be replicated over a longer time with more students. My study only used 2 students from general education and one student who was on an IEP. Future studies could use multiple classrooms with more students on IEP plans and also include a sampling of students in the general education population. If more children who participate in the study have IEPs, the data that is produced could be drastically different. The children with IEPs may not have the same success with the engagement strategies or may need more incidental teaching and embedding interventions to meet their goals.

Another recommendation would be to include more observers in the study who can observe students in more parts of the day. Due to time constraints as being the only observer and primary teacher, I limited my observations to three parts of the day with the addition of videotaping our class circle. Outside observers could continue with active learning, gym, and small group, but could also include routines such as arrival and snack to record engagement levels and find opportunities to embed learning goals. With this data, observers could draw conclusions on which activities and times of the day are more engaging to children, and which times may not be as engaging and need more interventions put into place.

Conclusion

The purpose of my action research was to find effective instructional strategies and environmental changes that help increase engagement levels in students. When teachers improve engagement of students, they are helping them build cognitive, social, and behavior skills.

Providing children with engaging materials and a predictable routine can keep children engaged and motivated to learn. The training I received about instructional strategies that focused on child engagement appeared to be effective in increasing the amount of time children engaged in the classroom. In conclusion, children who are engaged with learning will be able to build academic and social-emotional skills necessary to be successful in school.

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